IMPLEMENTATION TEAM MEETING NOTES

February 10, 2000, 9:00 a.m.-4 p.m.

NATIONAL MARINE FISHERIES SERVICE OFFICES
PORTLAND, OREGON

I. Greetings, Introductions and Review of the Agenda.

The February 10, 2000 meeting of the Implementation Team, held at the National Marine Fisheries Service's offices in Portland, Oregon, was chaired by Brian Brown of NMFS and facilitated by Donna Silverberg. The agenda for the February 10 meeting and a list of attendees are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced in the body of the text may be too lengthy to attach; all enclosures referenced are available upon request from NMFS's Kathy Ceballos at 503/230-5420 or via email at kathy.ceballos@noaa.gov.

Brown and Silverberg welcomed everyone to the meeting, led a round of introductions and a review of the agenda.

II. Updates.

A. In-Season Management. The Corps' Cindy Henriksen reported that the February final water supply forecast is now available; at Grand Coulee, the January-July volume forecast is now 66.1 MAF, 104 percent of normal and about the same volume shown in the January final forecast. At Lower Granite, the April-July volume forecast is 19.7 MAF, 91 percent of average, an increase of about six percent over the January final forecast. At The Dalles, the January-July forecast is 106 MAF, 100 percent of normal.

Henriksen said the TMT has been meeting regularly to complete its normal pre-season planning

process. One of the items we've been discussing, of course, is the 2000 Water Management Plan, said Henriksen; we had been discussing the possibility of developing goals, objectives and criteria to guide in-season management actions this year, but it now appears that the 2000 Water Management Plan will be a more traditional-looking document. There is a possibility that the TMT will be framing some issues for IT resolution connected with the Water Management Plan, Henriksen added. The next TMT meeting is scheduled for February 25, and we should have a first draft of the Water Management Plan, including the spill management and dissolved gas management appendices, to work on at that meeting.

The other document we have been working on is the TMT Guidelines, Henriksen continued; one of the things we have been discussing, of course, is the change to the TMT's weekly schedule, and the move to Thursday morning meetings. System operational requests (SORs) would still be due on Tuesday afternoons, Henriksen said, and as most of you are aware, we have been discussing how and when each week's SORs would be distributed. We are considering the possibility that each week's SORs would be distributed, prior to the weekly meeting, only to the action agencies – the Corps, Reclamation and Bonneville, Henriksen said. The SORs would then be publically distributed via the TMT's Internet homepage on Thursday morning.

Some of the utilities and other purchasers in the region asked for the opportunity to explore the ramifications of this change in schedule in more detail, said Henriksen; meetings have therefore been scheduled between those interests and BPA. Because those discussions are ongoing, however, the TMT has not yet finalized the Guidelines for this year. Hopefully, we can resolve that at the February 25 meeting.

Do you have forecast information for Libby and Dworshak? asked Jim Ruff of NMFS. The Libby forecast is 107 percent of average, Henriksen replied; I didn't bring the exact numbers with me for Dworshak, but I believe the February final forecast is 2.8 MAF for the April-July period, 104 percent of average, down from 110 percent of average in the January final forecast.

The only other thing to mention, in connection with the TMT, is the fact that we have also been discussing current river operations at each week's meeting, Henriksen said; during the pre-season period, those discussions have focused on Bonneville operations. We have been doing our best to maintain a minimum flow of 150 Kcfs to protect the Ives Island spawning site, she said.

B. Plan for Analyzing and Testing Hypotheses (PATH). No PATH update was presented at today's meeting.

C. Independent Scientific Advisory Board (ISAB). John Palensky distributed Enclosure C, which included a recent memo from Chip McConnaha to the Power Planning Council laying out the work products currently on the ISAB's plate, as well as several letters from parties in the region requesting additional ISAB reviews. This is F.Y.I., he said; I didn't intend to have a discussion of this list at today's meeting.

D. Water Quality Team (WQT). The Water Quality Team has been dealing with a number of items lately, said WQT co-chair Mark Schneider, beginning with the dissolved gas waivers for the 2000 spill season. On that front, he said, the letters to Oregon and Washington have been sent; similar letters will be sent soon to Idaho and the Nez Perce Tribe.

The Water Quality Team has also been discussing the 2000 Water Quality Plan, as well as the 2000 Water Management Plan the TMT is working on, Schneider continued. One of the major items of discussion for the WQT, and one that will require the IT's input, is the Corps' Dissolved Gas Monitoring Plan for 2000. Schneider distributed Enclosure D, a one-page description of the situation requiring IT resolution – essentially, the protocol for deciding whether an emergency field visit is needed to correct a problem at one of the Corps' monitoring stations. Some examples of the types of emergency situations we're talking about here would be the John Day spill issue and the Ice Harbor issue from last year, Schneider said.

Because of those situations, he continued, there was a concern, on the part of some of the participants in the Corps' annual monitoring program post-season review, that emergency protocols need to be in place prior to the in-season period, in case a similar situation should arise in the future, Schneider explained. A small group, led by the Corps, got together and developed some language for insertion in the 2000 Dissolved Gas Monitoring Plan; the issue the WQT has been unable to resolve is which of the procedures captured in [Enclosure D] – Option 1 or Option 2 – should be included in the plan.

Essentially, under Option 1, the Corps would be responsible for notifying the WQT members in the event of an emergency, to assist in making recommendations to solve the emergency, Schneider said. Under Option 2, the Corps would first notify the TMT that an emergency had arisen, and would request assistance from the WQT only if there was a technical water quality issue that was a component of the emergency. Schneider noted that Option 1 is supported only by the Corps, while Option 2 is supported by the state water quality agencies represented on the WQT.

The WQT has been trying to resolve this issue since December, Schneider said; there appears to be little point in continuing to debate it, and we would like to request that the IT provide a solution to this dilemma.

Henriksen explained that the Corps' concern, in declining to support Option 2, is that any change in spill volume at a given project could be considered an emergency, based on the language proposed. If that is in fact the case, and the Corps is expected to contact the TMT every time it makes an adjustment, then the TMT might as well move into my office, she said – we adjust spill volumes all the time, based on what the instruments are telling us. Our concern isn't those day-to-day adjustments, replied Ron Boyce of ODFW – what this is meant to address is the anomalous situations that arise once or twice a season, where spill volumes are throttled back in response to what turns out to be an instrumentation problem.

Brown noted that the Corps relies on the WES-generated and Reservoir Control Center-generated gas production curves, subject to monitoring, to set the spill levels at each project. You start the spill season, you monitor, and everything looks fine for week after week when suddenly you see a reading at a given project that falls outside those curves, he said. It seems to me that the first assumption shouldn't be that the relationship changed, Brown said – the first assumption would be that something happened with the monitor.

So the real issue is that you would like to get protocols in place so that these situations are resolved more quickly in the future? Jim Litchfield asked. That's part of it, replied the Corps' Jim Athearn; the other part is that the fish managers would prefer that the spill volumes not be reduced when those situations occur – they would like the Corps to take a less-conservative approach, in other words.

Ruff observed that, when a given monitoring instrument malfunctions, it could be reading high, and it could be reading low. What if it goes down? he asked – does that mean the Corps automatically bumps the spill level upward? My point is, it could go either way, said Ruff; therefore, my recommendation would be that, when these occasional anomalous situations arise, the Corps simply maintain spill the way it is until the problem is resolved. The Corps would then invoke Option 2, notifying the TMT and, if necessary, the WQT, setting up a meeting to discuss whether or not the monitor is malfunctioning, doing a site visit and reporting back to the TMT for a decision, said Ruff. Athearn said the Corps is perfectly comfortable with Ruff's recommended approach, as long as the IT understands that other factors besides monitoring results – changes to total river flow etc. – affect spill levels. Boyce added that it is crucial, when these situations arise, that the Corps notify TMT in a very timely manner, rather than waiting until the next week's TMT meeting

After a few minutes of additional debate, Silverberg summarized the outcome of this discussion by saying that she heard general IT agreement that, if there is uncertainty about the monitoring data at a given project, with an abnormal reading that persists for more than 48 hours, the Corps will notify the TMT as soon as possible. If the Corps intends to change fish passage operations because of this uncertainty, the TMT and WQT will be notified of this change via email, and the TMT will determine whether or not a meeting to discuss the situation should be called. She volunteered to draft a statement to this effect over lunch, an exercise which resulted in the following language:

"If there is an uncertainty with an abnormal reading at a gas monitoring station that persist for more than 48 hours, the Corps will notify all Technical Management Team and Water Quality Team members as soon as possible via email. If the Corps plans to change fish passage actions because of the uncertainty, it should notify both TMT and WQT members of the proposed change. TMT members shall determine whether or not a meeting or conference call is needed and advise the Corps of this need. The COE will then convene a TMT meeting. Each state's fishery and water quality agencies should work together prior to any TMT meeting on this issue to balance and assure consistency of the proposed actions with fishery management requirements and state water quality standards."

E. System Configuration Team (SCT). Chairman Bill Hevlin said the next SCT meeting is scheduled for February 17; at that meeting, he said, we will be focusing on three main topics. The first is finalizing study plans for this spring, he said; the second is developing what we're calling a "report card" to the tribal caucus, and the third is review of the John Day drawdown Phase I study draft report.

With respect to the first item, said Hevlin, SCT is working with the Studies Review Work Group (SRWG) and FFDRWG on three main study areas. The first is the two new adult study proposals, which are now being re-worked to address comments from IDFG. These two new adult study proposals have to do with the concern, raised by the ISAB last year, about the energy expenditures of adults moving through the hydrosystem, and how that may effect spawning success. There was a coordination group meeting last Friday in Clarkston, which included representatives from both IDFG and the researchers, Hevlin said; it now looks as though it will be possible to modify those two study proposals to address IDFG's concerns, so that the studies can go forward in 2000.

SCT will also be discussing the juvenile survival study at The Dalles this spring, Hevlin continued; we expect the ISAB report on this subject to be available within the next two weeks, which will help finalize the plans for that study. The third study area the SCT is working on is the evaluation of the surface bypass collector at Lower Granite this spring, Hevlin said; currently, we're focusing on a spillway operational plan, during the evaluation, which will lay out an acceptable middle ground between the operational regime needed for the study, and spill operations for fish passage. At Lower Granite during the spring, the BiOp calls for 60 Kcfs spill during nighttime hours, Hevlin said; we're looking at modifying that to a 24-hour spill program at a volume of 15-20 percent of total flow. We had a conference call on this topic last Friday, and will get further into the details at next week's SCT meeting, said Hevlin.

Moving on, Hevlin said CRITFC sent a letter to Brian Brown and Doug Arndt, requesting the SCT's response to the 17 tribal caucus priority items laid out by Bob Heinith at the SCT's September 14 meeting. John Kranda and I have worked up a draft response or "report card," showing the SCT's action on those 17 tribal priorities, Hevlin said. Our plan is to go through that list item by item at the next SCT meeting, to ensure that all of those recommended actions enjoy SCT support, said Hevlin; we will then provide the "report card" to CRITFC.

Finally, said Hevlin, the Corps released its draft John Day drawdown Phase I report last week; there will be a detailed presentation on the analysis, the results and recommendations in that report at next week's SCT meeting. The Corps' John Kranda provided a brief overview of the draft report, noting that copies of the report will be available on CD-ROM within the next few days. Kranda added that the report is also available via the Internet at http://www.nwp.usace.army.mil/pm/projects/jddds. The bottom line on the report, he said, is that the Corps is recommending that the study of John Day drawdown not proceed past this Phase 1 report at this time. Before we send that recommendation to Congress in June, however, we need to take comment and input from the region, Kranda said. In

response to a question, Kranda said close of comment on the report is March 31.

In response to a question from Howard Schaller, Kranda said it is the Corps' intention to review the draft report for consistency with the results of the EDT analysis. In response to another question from Schaller, it was agreed to ask the ISAB to review the Corps' draft report. The group spent a few minutes discussing the results and recommendations in the draft report; ultimately, it was agreed to place a discussion of the John Day drawdown draft report on the agenda for the next IT meeting, once everyone has had a chance to read it. And again, everyone is welcome to come to next week's SCT meeting, where the report will be discussed in detail, Kranda said.

Kranda added that the report includes some fairly daunting cost estimates: a range of $2 billion to $5 billion for dam removal, depending on which alternative is selected, plus an average annual cost of $400 million to $700 million. Relative to the other options explored in the All-H paper, Kranda said, this is a high-cost item, and that was part of the reason for the Corps' recommendation not to proceed with further phases of study. Ruff asked whether the IEAB had been asked to review those cost estimates; Kranda replied that he doesn't know, but will find out.

Silverberg suggested that it may be a good idea for the Corps to schedule a conference call to give the IT members a chance to ask clarifying questions, if it isn't possible to have the right Corps people attend the March 2 IT meeting (they may need to attend a public meeting in Missoula that night). Kranda said he will work with Jim Ruff to arrange such a call, if the IT feels it is necessary.

F. Quantitative Analytical Report (QAR). The February QAR update was presented during Agenda Item IV, below.

G. Federal Caucus and Framework Hydro Developments. No update was presented at today's meeting.

III. Review of the Scope of the Regional Forum in the Post-2000 Period.

John Palensky distributed Enclosure I, a summary of the IT's conclusions on the issues raised in the course of the discussion, to date, of the IT's role in the post-2000 period: Willamette operations, Upper Snake River operations, Clean Water Act issues, ocean and estuary, Hanford Reach, non-hydro Hs and Flathead Basin operations. He asked the other IT participants to review this document to be sure that it accurately reflects what was agreed to; what I propose in the revised Interim Procedures for the Regional Implementation Forum (Enclosure J) is that we attach that document, or something very similar to it, Palensky said.

Palensky added that he would like to have some substantial discussion of the revised Interim Procedures document at the next IT meeting. There are three main areas we're going to need to work through, said Brown, first, the fact that PATH will no longer be in existence, which means we need to

decide on the appropriate linkage between the IT and whatever collaborative analytical process is created. Second, said Brown, there is a funding issue, related to the availability, or lack thereof, of Corps O&M funds for FCRPS projects. Third, said Brown, the way the Council funding process works is changing – in the future, the emphasis of the Council process will be on subbasin planning. That raises the question of access to Bonneville funds for mainstem projects, said Brown – is this the mainstem group, or is there another mainstem group we need to be coordinating with, in order to get mainstem issues considered for funding? These are three issues I would like you to bear in mind, as you read through the guidelines, Brown said. Silverberg asked that all IT members come to the March meeting prepared to discuss these items.

IV. QAR – Report on Upper Columbia River Steelhead and Spring Chinook Population Structure and Biological Requirements.

As the IT will recall, said Hevlin, the Quantitative Analytical Report process began last summer, with the objective of producing two work products – a biological requirements paper, and an analysis of the effects of proposed actions -- for the Upper Columbia listed species, steelhead and chinook. The subject of today's briefing is the Biological Requirements paper, Hevlin said; the second report on the analysis of the effects of proposed actions should be available later this month, so it might be a good idea to set aside some time on the March IT agenda to receive a briefing on that document.

Mike Ford of the NMFS Science Center distributed copies of the draft QAR report, titled "Upper Columbia River Steelhead and Spring Chinook Salmon Population Structure and Biological Requirements;" this document is Enclosure E. Ford then went through a series of overheads, describing the strategy, rationale, geographic scope, demographic history, types of data used, technical basis and results and conclusions in the study. Among the highlights:

Conclusions (Spring Chinook):

- There are at least three independent populations:
- Wenatchee River
- Entiat River
- Methow River
- In the Okanogan River, the group concluded that, while there may have been an independent population at one time, that population no longer exists.

Conclusions (Steelhead):

- Historically, there were at least three independent populations:
- Wenatchee River
- Entiat River

- Methow River
- In the Okanogan River, the group concluded that, while there may have been an independent population at one time, that population no longer exists.

The Populations are Not Homogenous

- There is some statistically significant genetic differentiation within major tributaries (White R., Twisp R.)
- There are some statistically-significant differences in length-at-age within major tributaries
- There are environmental differences within major tributaries

Biological Requirements Based on VSP Parameters and Guidelines

- Abundance
- Productivity
- Substructure
- Diversity

Steelhead Interim Recovery Abundance Levels (Geometric Mean Over 12 Years):

- Wenatchee Population: 2,500 natural origin spawners/year
- Methow Population: 2,500 natural-origin spawners/year
- Entiat Population: 500 natural-origin spawners/year

Spring Chinook Interim Recovery Abundance Levels (Geometric Mean Over 12 Years):

- Wenatchee River: 3,750 natural origin spawners/year
- Methow River: 2,000 natural-origin spawners/year
- Entiat Population: 500 natural-origin spawners/year

Population Substructure:

- **Qualitative Criteria (Spring Chinook and Steelhead)**: These populations should be able to utilize properly-functioning habitat in multiple spawning streams within each major tributary, with patterns of straying among those areas free from human-caused disruptions.

- **Quantitative Criteria (Spring Chinook Only)**: Spawn in at least three streams, with each stream containing at least 5% of the total spawning abundance (Wenatchee and Methow populations)

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Diversity Thresholds (Spring Chinook and Steelhead):

- Natural self-sustaining (not dependent on artificial propagation)
- Levels of gene flow from non-ESU populations <1%
- Patterns of dispersal and straying within ESU not substantially altered by human effects

Number of Populations: At Least Three

- Protect against catastrophic loss
- Maintain long-term metapopulation dynamics
- Maintain genetic and phenotypic diversity within ESUs.

In response to a question, Ford said recent spawner estimates for the Upper Columbia stocks have been quite low, in the range of 100 or less for the Wenatchee population and 30-50 for the Entiat population.

Ford answered a few technical questions from the group; Hevlin then reiterated that the analysis of the effects of proposed actions piece of the QAR should be available for presentation at next month's IT meeting. I think it would be valuable if we could see that prior to further discussion on this topic, he said.

BPA's Dan Daley complimented Ford on a very clear and precise presentation.

V. Overview of the Draft Columbia Mainstem Water Quality Plan.

Brown noted that, later in today's agenda, the group will be receiving an update on the consultations of the Biological Assessment on the FCRPS – the re-initiation of the Biological Opinion. There has been considerable discussion about developing a water quality plan for inclusion in the 2000 Biological Opinion, said Brown, because the federal parties have agreed to address both Clean Water Act and ESA issues through this upcoming decision. We have agreed that this water quality plan will be developed, he said, and that it will be a stand-alone document, which will be referenced in and/or attached to the 2000 BiOp.

In terms of the contents of the water quality plan, there will be several main components, one of which is specific measures, Brown continued. Some of those measures are already being implemented through SCT, or are ready for implementation; others will require some further study. The water quality plan will also include a process for making decisions about the latter group. Other main components of the water quality plan include a monitoring and evaluation plan (addressed under Agenda Item VI,

below), and a risk assessment on spill vs. gas, Brown said.

The major issues addressed in the water quality plan, not surprisingly, are gas and temperature, said Brown. Under temperature, major subheadings include the Dworshak operation; Brown noted that Dworshak is the subject of ongoing negotiations between the Nez Perce Tribe, Idaho, EPA and TMT. The objective of that process is to develop some additional definition to the objectives for the management of Dworshak; while leaving some room for discretionary in-season management, said Brown, to the extent that we can define, in advance, how that reservoir will be used to meet water quality goals and provide flow augmentation, the better off we'll be. Other temperature subheadings will include monitoring and modeling information, Brown said.

Under dissolved gas, the plan will address the question of how we can simultaneously work toward meeting the water quality standards, and meet the BiOp requirement that we ratchet up spill at every site where gas abatement improvements have been made in order to keep a constant spill level, Brown continued. The concept we've been tossing around internally is to accept a target period, something on the order of 12 years, after which we would be in compliance with the water quality standards, he said. We would also do a check-in somewhere around 2008, to see where we are, in terms of providing alternative (non-spill) means of fish passage at each project; the idea is also that we would not reduce fish protection in order to achieve those standards – at least, not at the mainstem projects for listed fish, said Brown.

Following the 2008 check-in, he continued, we would make a decision – either there are implementable alternative measures for passing fish, which will allow us to reduce spill and meet the 110% CWA standard, or there are additional gas abatement measures we can implement to allow us to continue an adequate level of spill to maintain sufficient levels of fish protection. Either that, said Brown, or we will start the studies we believe are necessary to change the standard.

EPA's Mary Lou Soscia distributed Enclosure G, the most recent (January 19) draft of the proposed water quality chapter for inclusion in the 2000 FCRPS Biological Opinion. Basically, she said, this is the draft I've put on the table in the federal Biological Opinion consultation group; it is a compilation of the documents that have been developed in concert between EPA and the states of Oregon, Washington and Idaho. Soscia briefly described the various statutory authorities underlying this partnership, then spent a few minutes going through the contents of the draft water quality chapter. Please see Enclosure G for details of Soscia's briefing.

Soscia noted that a subgroup of the federal BiOp consultation group has been convened to work through the draft water quality chapter in an attempt to reach agreement on what will be included in the water quality plan and in the Biological Opinion. This subgroup will also develop a connection with the states on how further development of the water quality plan will take place. She added that the

first meeting of this subgroup is scheduled for later this afternoon. The goal is to reach agreement on the water quality reference that will be included in the BiOp by the time the 2000 Biological Opinion is drafted, she said. Essentially, this plan will amount to a TMDL for the Columbia mainstem; a TMDL is a loading allocation, an analysis, the development of which will be an extremely complex undertaking. Soscia added that, given this complexity, the water quality plan that is attached to the Biological Opinion will necessarily be an iterative document, subject to revision as new information is developed and new agreements are reached.

The group devoted a few minutes of discussion to the geographic scope of the water quality plan; Soscia noted that the scope is mainstem only -- with the exception of the Clearwater River below Dworshak, tributaries will not be covered in the plan. The group also discussed the complex statutory authorities which will have to be satisfied by this plan; ultimately, Soscia said the 2008 "check-in point" referenced earlier by Brown is attracting increasing support, as the best mechanism to ensure that the various standards will be met.

Jim Yost of Idaho observed that, while he is not a scholar of the Clean Water Act, he does not recall that it gives EPA the authority to develop a TMDL for the mainstem. This being the case, said Yost, I would expect, at some point, that EPA will ask Idaho for a waiver of its authority to develop such a mainstem TMDL. I also don't see anything in the Clean Water Act empowering the Corps, Reclamation, BPA and other federal agencies to develop a TMDL, said Yost – while it could be argued, within some stretch of the imagination, that EPA could do a TMDL with the states, I can't foresee a circumstance under which the federal operators could develop a TMDL. Perhaps, at a future meeting, you could explain to me how the federal agencies could be involved in developing a TMDL for the mainstem under the Clean Water Act, as well as what the state role in developing that mainstem TMDL might be, Yost said.

To briefly respond, said Soscia, in 1997, Chuck Clark and the three state environmental directors reached a gentleman's agreement that EPA would take the lead on developing the mainstem TMDL. We fully expect that the states will promulgate the TMDL – EPA's is a coordination and support role only, Soscia said. We will lead the effort, and will be a source of funding and analysis; we are planning to develop a formal agreement, laying out the exact roles of EPA and the three states in this effort, she added. To be clear, the TMDL is not going to be developed by the Corps, Reclamation, NMFS, BPA or anyone else, Soscia said. Daley added that there is no expectation, on the part of the federal caucus, that it would be possible to include a TMDL in the 2000 Biological Opinion, or that they will interfere, in any way, shape or form, with the states' development of the TMDL.

Is there agreement that the 2000 Biological Opinion will include this water quality plan, or will it only reference the plan? Yost asked. It will, at minimum, reference the water quality plan, Brown

replied; the plan may become an appendix, rather than part of the BiOp itself. To the extent that the plan identifies a significant number of measures that are also incorporated into the Biological Opinion as measures to avoid jeopardy, it would be helpful to have those measures in the context of the broader plan that they're a part of, said Brown.

VI. Proposal for Snake River Water Temperature Monitoring Plan.

Rich Domingue of NMFS said the purpose of his briefing today is to update the TMT on the current status of the development of a proposal for a regional water temperature monitoring plan and protocol for the Snake River, a task that began last June. You will recall that, last June, CRITFC requested the re-installation of the tri-level thermograph system that had been installed in previous years in the Lower Snake River, Domingue said; the program had been discontinued because the research it was supporting had been completed.

There was regional support for continued tri-level thermograph monitoring, Domingue said; however, there were questions about what kind of monitoring would be most appropriate. The Water Quality Team was asked to review the need to expand the existing monitoring system, to consult with TMT, and, in general, to look at this question from a long-term perspective, he explained.

In July, Domingue continued, the TMT reported that they saw a value in continued monitoring, for both pre- and post-season management and planning. We were directed to form a WQT subgroup to develop a proposal for funding in 2000. In August, we were directed to review and consult on the potential applications of this new data; the WQT conducted a fast-track review of the existing data, then constructed a revised water temperature monitoring framework. That framework was accepted in September, Domingue said. In October, the WQT reported on assignments, completed the data review, and began development of the scope of work for the monitoring effort.

That sets the stage for where we are today, said Domingue, distributing Enclosure H – a document titled "Proposal for a Regional Water Temperature Monitoring Plan and Protocol for the Snake River." He noted that this proposal is in extremely draft form; in essence, it is a proposal to develop a scope of work for a more detailed analysis of temperature in the Lower Snake River, particularly in the reach from Hells Canyon to Lower Granite Dam. The bulk of the monitoring would focus on Lower Granite Reservoir, Domingue said; this paper lays out the reasons we feel it is important to focus on temperature effects at Lower Granite. Domingue then briefly reviewed the contents of Enclosure H, working from a series of overheads; please refer to this document for details.

Howard Schaller expressed reservations about the monitoring effort's proposed focus on fall chinook and on the Lower Granite pool; the group spent a few minutes discussing the technical details of the proposal. Ultimately, Silverberg asked what Domingue would like the IT to provide at today's meeting; Domingue replied that some IT direction as to where this proposal should go next would be helpful. My assumption is that, if your direction is that a scientific study plan be developed, that needs to go from IT to the agencies that would then carry that plan to CBFWA, Domingue said. It could also be melded into the BiOp water temperature plan, he said.

Boyce noted that there is an interest, at TMT, to figure out the best balance between Dworshak and Hells Canyon operations in order to provide maximum cooling in the Snake River to benefit both adult and juvenile migrants, and to minimize impacts to rearing Clearwater fall chinook juveniles. We need something that will provide real-time information, during the in-season management period, to support the TMT's decision-making about how to maximize the benefits of those Dworshak and Hells Canyon operations, Boyce said. And that is exactly the focus of what we've proposed, Domingue replied. One clear outcome of this work would be information to support the development of a two-dimensional model into which you could plug alternative scenarios, and investigate their outcomes in terms of temperature distributions in Lower Granite Reservoir and tailrace.

Thinking back to last August's dispute over Dworshak operations, we had one group saying that the best way to operate that project was to spread out the cold-water releases from Dworshak over a longer period, in part to benefit September migrants, and another group that argued that concentrating those cold water releases earlier in the season would confer a greater biological benefit, Brown said. What this monitoring program is intended to do is avoid that kind of dispute, he said. Boyce said that, if that is the intent, he agrees with Schaller that the monitoring effort needs to focus on more than just Lower Granite. Domingue replied that it would be important to integrate other data, such as the water temperature information that is being collected in the Hells Canyon reach by Idaho Power for its FERC relicensing program, into the database for the two-dimensional model. Domingue added that, even if all of this information can be collected, it is unlikely to resolve all of the conflicts inherent in reservoir management for temperature benefit.

Idaho Power's Roger Fuhrman commented that, if the managers are to assess the biological benefits of Dworshak and Brownlee operations, understanding which areas of Lower Granite Reservoir the fish are using is just as important as the temperature information. We need to do both, Domingue agreed. The Corps' Jim Athearn added that Ted Bjornn's group is investigating the movement of adult fish through that system; I agree with you that we also need an understanding of juvenile behavior at that project, he said. Athearn added that, while the TMT has said that this additional data would be helpful to its in-season decision-making, there is also a lot of data already out there. My question is, how much of that existing data is actually being used, he said – I've been told that there are two or three years of data that no one has even bothered to look at yet. Do we really need to go out and gather more,

Athearn asked, before we've even looked at what we already have?

Part of the reason the tribes are pushing for the re-installation of the tri-level thermographs is the location of the monitors that have collected this data in the past, said Tom Lorz of CRITFC – scroll cases give you a good average-depth temperature, at best, while the forebay monitoring sites give you readings at 15 feet in depth. One of our goals is to be able to match the temperature data up with fish movement data, he said. We do collect a lot of data, but it isn't always that useful, in terms of in-season management of the system.

The whole issue of what to do with these proposals boils down to the fact that they need to be plugged into the funding prioritization process, said Schaller, to see how important the reviewers feel this increased precision would be to our ability to manage the system, where it fits with other regional priorities, and how expensive it's going to be. This predictive tool doesn't exist yet; we have no idea what its predictive capability will be, nor do we know what fish behavior is, nor do we know what degree of precision we'll need to manage the fish behavior we have not yet observed, Schaller said. It seems to me that all of these things need to be placed on the table, and evaluated through the funding prioritization process.

Has this been presented to the Water Quality Team? Brown asked. Yes, Domingue replied. What was their reaction? Brown asked. I didn't hear strong support, Domingue replied – they suggested that we take it to the IT, to see whether or not it meets your needs. Boyce observed that the original goal of this effort, as articulated by the TMT, was to develop a physical model that could provide some guidance as to the best way to operate Snake River reservoirs to minimize water temperature. This proposal, frankly, goes well beyond that, said Boyce; I would suggest that we send it back to TMT, for further discussion about how they would use this concept.

The problem is that models are only as good as the data you put into them, said Ruff, and the bottom line is, the data that is available for use in a Snake River water temperature model isn't very good – it's scroll case data from the bottom of the reservoir, and we know that Lower Granite Reservoir is stratified, particularly when Dworshak is releasing cool water. To build a useful two-dimensional model, you need tri-level thermograph data, or you need a monitoring program such as the one Rich has put forward, said Ruff. This issue has been kicking around since June, he said, and we need to move it along or drop it.

Daley said that, while he would be the last person to argue that better water temperature data is not needed for the Snake River, this proposal needs a lot more development before it is brought back before the IT. One of the things that needs to be done is a comprehensive review of the existing data, he said; BPA, for one, is concerned about the cost estimates for this project – we could sink literally hundreds of millions of dollars into a comprehensive tri-level thermograph system in the Snake, and we

need to be sure we really need it. Actually, I think the cost estimates for this particular project are an order of magnitude less than that, said Ruff.

Athearn noted that both Bjornn and Bennett's proposals include continuous tri-level monitoring in all four Lower Snake pools in 2000. If they're not putting those monitors where they need to be, Athearn said, then you need to provide that feedback so that we get the data everyone seems to be wanting. In other words, he said, there will be more information available this year, no matter what we decide to do with this proposal.

Ultimately, Brown suggested that the Water Quality Team, the TMT and the group that is developing the water quality plan for the Biological Opinion, all need to look at this proposal in detail, to determine whether or not it is meets their needs and approval. That would still leave this an orphan proposal, Ruff observed. That's true, said Brown, but absent a ringing endorsement from the TMT or the WQT, I don't know what more the Implementation Team can do.

Michael Newsom observed that this is the third water quality-related issue on today's agenda that has come before the IT without really being teed up for decision. I think the Water Quality Team, or somebody, needs to get their act together, pull together all of the issues, sort out the problems and make a good recommendation, he said. Until that happens, however, my advice would be, don't bring water quality issues to the IT.

After a few minutes of further discussion, no IT disagreements were raised to Brown's suggested resolution of this item. Basically, said Brown, EPA and the Oregon, Washington and Idaho water quality agencies all participate on the WQT; this is a comprehensive water temperature monitoring plan for a water quality-limited reach, and we need to hear what they have to say about it before the IT can make a decision. Boyce observed that the informational needs of the TMT and the WQT may be different, and suggested that the TMT be given an opportunity to review this proposal as soon as possible as well.

Silverberg summarized by saying that this proposal will be sent back to the TMT and WQT for review and endorsement, and that it will be linked into the TMDL development process through the WQT. The only thing I would add is that the WQT consult with TMT before making their recommendation to us, said Brown; it would also be appropriate to work it into the water quality plan that is being developed for the 2000 Biological Opinion.

VII. NMFS Update on Consultations on the Biological Assessment.

Brown provided an overview of the current status of the consultations on the 2000 FCRPS

Biological Opinion. He worked his way through a series of overheads, touching on the purpose, scope, and schedule for this effort, the scopes of the various action teams (Biological Benefits, Cost and Hydroregulation, Anadromous Fish Performance Standards, Water Quality and Resident Fish Teams) involved in the effort, and the issues that will be addressed in the 2000 BiOp: flow augmentation, spill for fish passage, fish passage facility/configuration improvements, fish transportation and performance standards.

Brown's overheads are Enclosure K; please refer to this document for details of his presentation. Enclosure K also includes a memo from Jim Ruff, describing the BPA hydroreg studies that are being done in support of the 2000 BiOp.

Brown noted that the schedule calls for the delivery of a draft Biological Opinion to the co-managers by March 31; in response to a question from Boyce, he said it is at that point that the other salmon managers will have an opportunity to provide detailed input. Brown asked the other IT participants to look over Ruff's memo to be sure that nothing important is missing from the list of planned hydroreg runs, or from the summary sheet (the last page of the handout).

Newsom noted that the TMT is in the process of developing decision criteria for use during the 2000 in-season management period; we're going through more or less the same process in developing the Biological Opinion, he said, and I would really encourage the idea that we coordinate those efforts – I would hate to throw a wrench into their in-season management plans by releasing a BiOp that ignores everything they've agreed on. That is certainly our intent, Brown replied.

VIII. Overview of Harvest and Hatchery Issues and their Potential Relationship to FCRPS Operations.

It was agreed to defer this agenda item until the next IT meeting.

IX. Next IT Meeting Date and Agenda Items.

The next meeting of the Implementation Team was set for Thursday, March 2, from 9 a.m. to 4 p.m. at NMFS' Portland offices. Brown noted that, in the future, because the TMT will be meeting on Thursdays in-season, it will be necessary for the IT to choose a different day of the week on which to meet; after a brief discussion, it was agreed to schedule future IT meetings on the first Wednesday of each month, beginning April 5. Meeting notes prepared by Jeff Kuechle, BPA contractor.